



Using Quizizz to Enhance the Vocabulary Knowledge of English Students at a Private University

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Abstract

The purpose of this study was to investigate the relationship between the Quizizz game-based platform and vocabulary knowledge. The researchers employed a quasi-experimental design with 241 first-year students enrolled in English classes at a private university. A paired *t*-test statistical analysis was used to compare the *pre-test* and *post-test* results, while a 5-point Likert scale was used to assess the opinions of the students/participants. The *pre-test* was administered before introducing the vocabulary exercises using the Quizizz game-based online platform. At the end of the four-month intervention period, a *post-test* was conducted along with the attitudinal survey. The results showed a significant improvement in favor of using a game-based platform, with a statistical difference of .01, indicating that students had substantially enhanced vocabulary knowledge. Moreover, students' opinions on using Quizizz were overwhelmingly positive. These findings aligned with previous research suggesting that Quizizz effectively enhances vocabulary knowledge. Most importantly, based on the findings of the present research, it was recommended that Quizizz be utilized to enhance vocabulary knowledge in English classes for college students.

Keywords: English language learning, game-based platform, Quizizz, vocabulary knowledge

Introduction

Many ELT researchers have acknowledged the importance of vocabulary knowledge in schools and universities (Blachowicz & Fisher, 2008; Coyne, Simmons, Kame'enui, & Stoolmiller, 2004; Templeton, Bear, Invernizzi, & Johnston, 2010). Several reasons to ascertain the importance of vocabulary knowledge were also given through research studies. For example,

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Sedita (2005) emphasized that having a proficient vocabulary is necessary because it is the foundation for accessing prior knowledge, expressing ideas, and communicating efficiently. It means that having vocabulary is not only knowing words but also using them to discuss new knowledge. Likewise, Nation (1994) stated that vocabulary is not an end in itself. It should enhance listening, speaking, reading, and writing skills. Locally, Thai researchers had comparable beliefs about the importance of vocabulary knowledge. Boonkongsaen and Intaraprasert (2014) believed that the core of learning a language is vocabulary because it is the primary component that strengthens the four main language skills. Therefore, if a learner has poor vocabulary, it is difficult to enhance these skills because vocabulary is crucial for understanding and expressing ideas. Vocabulary is widely recognized as an important factor in learning a foreign language, and the success of students' communicative skills is based on vocabulary acquisition and retention (Liangpanit, 2015). It can be drawn from these international and local language researchers that vocabulary knowledge is important in order to facilitate learning the English language. Thus, when students know more vocabulary, it is easy to learn more, making comprehension better.

Teachers usually try to find ways to help students improve vocabulary knowledge learning. Different teaching strategies are employed in most subjects and courses to help students with difficulties including vocabulary building. One strategy most teachers use nowadays is the use of technology in the classroom. Teachers use different forms of technology to support the teaching process, involve students in learning, provide authentic materials for concrete examples in class, and connect classrooms to the real world. Motteram (2013) stated that all grade levels throughout the world use technology, especially in language learning. The advent of technology provides several methods that could simplify vocabulary learning in the classroom. Kayaoglu, Akbas, and Ozturk, (2011) noted that learning English through computer technology could address some challenges that language learners may encounter, and technology could support the process. These included computer applications such as dictionaries, vocabulary games, and reading activities. The features that computers offer can make the process of learning vocabulary more effective and interesting. In the Thai setting, Suppasetsee and Linh (2016) said that technology serves as an important tool for the instruction and acquisition of language in many schools and institutions, where it is widely used by both students and teachers. Similarly, Wichadee and Pattanapichet (2018) believed that traditional games in the classroom are declining because the use of technology provides more engaging games and class activities that are more interesting for the student's lifestyles. They further noted that digital or online games included in the teaching method are more applicable for the learners who can access these games on mobile apps, making them more exciting.

Therefore, to enhance the vocabulary knowledge of first-year English students, the researchers were motivated to use technology specifically the Quizizz game-based platform. As Junior (2019) stated, Quizizz is used by millions of teachers and students across over 100 countries, with offices in Bangalore and Santa Monica, United States. Thus, it may be effective to use Quizizz to enhance the vocabulary knowledge of English students at a private university in Nakhon Pathom.

Literature Review

1. The Importance of Vocabulary in English Language Learning

The essential role of vocabulary knowledge has been exhibited in English language learning. For instance, Graves (2006) noted that vocabulary is crucial for an individual's success in and out of university. Having a rich vocabulary knowledge contributes to a good academic performance of students and after their education, professional success is more likely possible. Additionally, Suing (2019) mentioned that vocabulary is a necessary tool that provides access to comprehension of all subjects at universities. Students with proficient vocabulary knowledge can access many words easily and understand their deeper meaning when they encounter them in grade-level texts (Carlo & Snow, 2004).

Similarly, in the Thai setting, according to Boonkongsaen and Intaraprasert (2014), vocabulary is a fundamental tool among second-language and foreign-language learners. It can back up the listening, speaking, reading, and writing proficiency of the learners. This was affirmed by Saengpakdeejit (2014) noting that “vocabulary has been recognized as an important factor for language learning because insufficient vocabulary knowledge leads the learners to encounter difficulties in language learning” (p.147). Correspondingly, Orawiwatnakul (2011) confirmed that students at the university level encounter high pressures of reading many texts in their major fields so vocabulary is vital to their reading success.

Thus, it can be interpreted that vocabulary is an indispensable element of English language learning, influencing the learners' immediate academic requirements and future success.

2. What is Quizizz?

According to Zhao (2019), Quizizz is an educational game-based application that is interactive and can be played by all students. Using their mobile phones and other gadgets, students can review the knowledge they have learned in a fun way. The features of the application are like games online making it very interesting and motivating. Music, ranking, and avatars are also available for the students to enjoy, and they are encouraged to play and be active. Aside from that, students can just go to the webpage joinmyquiz.com get a code from the teacher, and there is no need to download the application. There is an offline mode that teachers can utilize to assign homework so that students can review by themselves at their own pace. Additionally, teachers can also choose ready-made public quizzes and edit them easily which is time-saving. Likewise, they can also share their quiz by making it public so that anyone can have access. Quizizz also allows short or long questions and time limits for each question. After the game, detailed reports can also be downloaded in Excel spreadsheets for teachers' documentation.

3. Related Studies

Previously, several studies have been conducted in the classroom to support learners using Quizizz. Meng et al (2019) explored the use of Quizizz among technical and vocational students and found that over 70% of them scored above 50% on quizzes. It was revealed that using Quizizz meets the psychological needs of the learners interested in gaming. Similar

results were found in the study conducted by Martines et al (2018), finding Quizizz's impact on learning and motivation in a group of Tourism students, with 84% reporting improved learning and 78% claiming that they were motivated to engage with the subject. Correspondingly, Rajendan, Naaim, and Yunus (2019) investigated the use of Quizizz among high school students. Results showed that students held a constructive view of Quizizz as an English learning tool in class. Students also boosted their motivation to achieve higher scores to be on top of the leaderboard. In the Thai context, Panmei and Waluyo (2022) examined the impact of gamified vocabulary learning on first-year university students using Quizizz. These findings provided instructors useful understanding of how gamification can be integrated into vocabulary learning to facilitate vocabulary acquisition and promote learners' autonomy. Together, these studies confirm the effectiveness of Quizizz in enhancing student motivation while supporting learning outcomes, including vocabulary learning, across different educational settings.

Given that technology is inevitable and motivating for the students, teachers are encouraged to incorporate it into the lessons. Educators should be creative, and resourceful in designing engaging games and exercises through widely recognized game-based platforms like Quizizz. Thus, the current researchers were motivated to conduct this study to help English students boost vocabulary knowledge in an enjoyable, game-based format via Quizizz. Since students are strongly interested in gaming, this method provides an engaging way to stay focused on their studies while maintaining motivation.

Research Objectives

The present study has two main objectives:

1. To compare the results of the *pre-test* and *post-test* after using Quizizz game-based platform, and
2. To analyze the opinions of first-year English students regarding the use of Quizizz to enhance vocabulary knowledge at a private university

Hypotheses of the Study

This study hypothesized the following:

1. After using Quizizz game-based platform activities, the participants will achieve higher scores in the post-test compared to the pre-test.
2. The first-year English students will have positive opinions of Quizizz in enhancing vocabulary knowledge.

Methodology

1. Research Design

The research employed a quasi-experimental approach among first-year students enrolled in English classes, using a one-group design with a *pre-test*, *post-test*, and a questionnaire to gather data. The *pre-test* was administered on the first day, followed by a series of exercises via Quizizz. On the last day, the participants took the *post-test* and then filled out the

questionnaire. This methodology allowed the researchers to evaluate the effectiveness of using vocabulary exercises through the Quizizz by comparing the *pre-test* and *post-test* scores.

2. Population and Samples

The study was conducted at a private university in Nakhon Pathom, Thailand where the researchers taught General English courses. A purposive sampling method was used to gather data among 241 first-year students enrolled in nine sections of English I. The purposively selected students used the Quizizz for vocabulary exercises, with content from the course textbook. English I is a general English course designed to improve students' listening and speaking skills. Furthermore, instructors provided supplementary vocabulary-learning exercises to develop the student's English proficiency. Thus, participants in this study were selected to assess the effects of using the Quizizz platform in enhancing vocabulary knowledge.

3. Instruments and Procedures

The study used three instruments throughout the research process: a *pre-test*, a *post-test*, and a questionnaire consisting of two parts: a 5-point Likert scale and an open-ended question. These tools were reviewed and approved by three experts in English language teaching using the *Index of Item-Objective Congruence* (IOC). The 50-item multiple-choice *pre-test* and *post-test* questions were rated an IOC ranging from 0.67 to 1.00, suggesting that the items were aligned with the study's objectives. The questionnaire received IOC scores between 0.80 to 1.00, which demonstrated validity for obtaining students' opinions. Likewise, a pilot test was administered to 20 first-year students who studied English I in different semesters. The results were analyzed using Cronbach's alpha coefficient, resulting in an alpha value of .87 for the *pre-test* and *post-test* and 0.91 for the questionnaire. These results confirmed the reliability of the research instruments. Additionally, the *pre-test* and *post-test* were checked for the level of difficulty: thirty items were categorized as moderate, ten as easy, and the remaining ten as difficult. Some items were modified according to the feedback and suggestions from the experts. The discrimination index was from 0.30 to 0.50 which indicated that the test items were effective in distinguishing between high and low-performing students. Based on these tools, the researchers concluded that the instruments were both effective and aligned with the study's objective.

4. Data Collection

Data were collected from 241 students across the nine sections of English I classes during semester 2 of the academic year 2020. The data collection took place over four months, from December 2020 to March 2021. The intervention consisted of fourteen sessions and served as homework for the students to complete outside of class hours. The online exercises were launched via the Quizizz, allowing students to complete at their own pace and repeat the exercises as needed for mastery of the vocabulary. Moreover, there were two sessions for the *pre-test* and *post-test*, conducted before and after the intervention. The students were also given time to answer a questionnaire designed to gauge opinions towards the use of Quizizz to enhance vocabulary knowledge. The data gathered from the questionnaire addressed research

question number 2 and was analyzed using a 5-point Likert Scale. The scale was interpreted with 5 as the highest value and 1 as the lowest, corresponding respectively to strongly agree, agree, neither agree nor disagree, disagree, and strongly disagree. Additionally, there were two open-ended questions in the last part of the questionnaire. In this part, to ensure comprehensive expression, the participants were allowed to respond in Thai. The responses were translated into English by Thai instructors who also taught English at the university. This was followed to make sure that the interpretation was accurate while maintaining the integrity of the students' opinions.

5. Data Analysis

To have a precise view of the data gathered, several methods were employed. First, a statistical program was utilized to generate reliable results of the gathered data. A Paired *t*-test was used to compare the *pre-test* and *post-test* results using a computer program, providing a robust analysis of the data. Additionally, a 5-point Likert scale attitudinal survey was administered to evaluate the impact of Quizizz on the participants. The interpretation of the Likert scale results followed the university's standard, which was adapted from Best's (1970) guidelines for analyzing mean scores. The highest mean score was from 4.51 – 5.00, a very good, followed by 3.51 – 4.50, a good. Then, 2.51 – 3.50 and 1.51 – 2.50 are fair and poor respectively. The lowest mean score is 0.00 – 1.50, which is very poor. This interpretation framework clearly explains the participants' attitudes based on the responses.

Results

The results of the data analysis from the *pre-test*, *post-test*, and questionnaire conducted by the researchers are as follows:

1. Demographic Profile of the Students/ Participants

General information such as gender, year level, Grade Point Average (GPA), and major was collected from the participants during the research study.

Table 1

Demographic Profile

Variable	Frequency	Percentage (%)
Genders		
Male	23	9.54
Female	218	90.46
GPA		
3.10 – 3.50	176	73.03
2.60 – 3.00	48	19.92
2.10 – 2.50	15	6.22
1.50 – 2.00	2	0.83

Table 1 (Continued)

Variable	Frequency	Percentage (%)
Programs		
Nursing Science	206	85.48
Physical Therapy	26	10.79
Multimedia Design	5	2.08
Food Technology	2	0.83
Biomedical Engineering	1	0.41
Sport Science & Exercise	1	0.41

As shown in Table 1, there were 241 participants in this study. These students were regular first-year students enrolled in the English I course, which they took according to their study plan during semester 2 of the academic year 2020. The students came from six different programs in three colleges, namely, Nursing College, Allied Health, and Multidisciplinary College. Of the total participants, 218 (90.46%) were female, and 23 (9.54%) were male. A large number of students at this private university were studying Bachelor's Degree in Nursing Science program, with most of them being female. The participants' Grade Point Average (GPA) was also considered in this study. The majority of the participants have a 3.1 to 3.5 GPA which was 73.03% while two students have the lowest GPA of 1.5 to 2.0. In terms of programs, most of the participants were from the Nursing Science program (75%), and only 0.41% were from Biomedical Engineering and Sport Science and Exercise.

2. Comparison between Pre-test and Post-test

Table 2

Analysis of the Pre-test and Post-test based on Mean, Standard Deviation, t-value, and p-value

Overall	<i>M</i>	<i>SD.</i>	<i>t-value</i>	<i>p-value</i>
<i>Pre-test</i>	25.64	10.58	-19.827**	.000
<i>Post-test</i>	40.99	5.71		

** $p \leq .01$

The results demonstrated in Table 2 above indicate a significant improvement in the performance of participants in the *post-test*. The *t-value* for the comparison between the *pre-test* and *post-test* was -19.827**. The negative sign implied that the *post-test* score was higher than the *pre-test*. With a significant level (alpha) of .01, the findings demonstrate a statistically significant difference, as the *p-value* (.000), is lower than the alpha level of .01. This clearly illustrates that the participants significantly enhanced vocabulary knowledge by using the online exercises via Quizizz.

3. Opinions of Participants Toward Using Quizizz

Part two was used to gather participants' opinions on using Quizizz to enhance vocabulary knowledge, using the 5-point Likert scale. The results are presented below, showing the Mean and Standard Deviation scores.

Table 3*Ranking of the Participants' Opinions towards Using Quizizz*

	Rank	<i>M</i>	<i>SD.</i>	Interpretation
1. Using Quizizz is fun. (Item no. 3)		4.16	0.95	Good
2. Using Quizizz helps me enhance my vocabulary knowledge. (Item no. 4)		4.12	0.98	Good
3. Using Quizizz allows me to apply the vocabulary knowledge every day. (Item no. 5)		4.11	0.94	Good
4. Using Quizizz is simple and user-friendly. (Item no. 2)		4.08	0.97	Good
5.5 Using Quizizz offers exercises and drills geared towards improving my vocabulary knowledge. (Item no. 6)		4.07	0.97	Good
5.5 Using Quizizz increases vocabulary knowledge necessary in my daily conversation. (Item no. 7)		4.07	0.96	Good
7. Using Quizizz is interesting. (Item no. 1)		4.02	0.95	Good
	Total	4.09	0.96	Good

As illustrated in Table 3, the participants had a positive opinion toward using Quizizz to enhance vocabulary knowledge. The highest level of satisfaction was recorded for item 3, “Using Quizizz is fun,” with a mean score of $M = 4.16$. The second in rank was item 4, “Using Quizizz helps me enhance vocabulary knowledge,” with $M = 4.12$. It was followed by item 5, “Using Quizizz allows me to apply the vocabulary knowledge every day,” (rank 3) with $M = 4.11$. Item 2, “Using Quizizz is simple and user friendly,” ranked fourth with $M = 4.08$. Items 6 and 7, “Using Quizizz offers exercises and drills geared towards improving my vocabulary knowledge” and “Using Quizizz increases vocabulary knowledge necessary in my daily conversation,” both received $M = 4.07$, respectively. Finally, item 1, “Using Quizizz is interesting,” ranked lowest with $M = 4.02$, though it still received a positive rating.

Part three of the questionnaire was an open-ended question designed to gather opinions of the participants on using Quizizz to enhance vocabulary knowledge. The responses were overwhelmingly positive. The question asked was, “What can you say about the whole process of using Quizizz? Did it improve your vocabulary knowledge?” Out of 241 participants, 219 (90.87%) stated overwhelmingly positive experiences with Quizizz for enhancing vocabulary knowledge. They noted that using Quizizz not only improved their vocabulary knowledge but also increased their excitement to complete the activities. The immediate feedback on scores was cited as a key motivating factor, and students found it easier to use than traditional paper-based methods. Moreover, they felt that Quizizz improved their understanding of the lesson by providing an engaging platform for vocabulary practice. Most students also reported that Quizizz made learning vocabulary both enjoyable and effective.

Despite some positive feedback, 22 out of 241 participants (9.13%) expressed negative experiences with using Quizizz for learning vocabulary. Common complaints included feeling

distracted and lazy during activities, often due to opening other windows while doing the exercises. Some students found the allotted time insufficient for understanding the exercises fully. Technical issues, such as internet interruptions, affected their attention to the vocabulary exercises. Likewise, some participants found some words too difficult. Also, navigating the platform on mobile devices could pose challenges, particularly in identifying colors. Interestingly, these 22 students also scored very low in the pre and post-tests.

Overall, with the abovementioned comments, it could be concluded that the majority of the participants benefited from using Quizizz as a valuable tool for improving vocabulary knowledge.

Discussion

This research investigated the relationship between Quizizz and vocabulary knowledge among 241 English I students at a private university. After a four-month intervention, participants demonstrated significant improvements, as evidenced by higher scores in the post-test compared to pre-test results, as shown in Table 4. The researchers utilized a variety of vocabulary from the textbook's word list. Throughout the vocabulary drills launched via Quizizz, it was observed that English I students performed well when they were engaged, having fun, and using their gadgets. Results suggested that enhancing vocabulary knowledge by using Quizizz is both effective and efficient.

Likewise, the results were consistent with those conducted by Bal (2018), which explored the relationship between Mobile Application Language Learning (MALL) and vocabulary learning. The researcher used Quizizz as an intervention while the control group followed the traditional teaching method. Results indicated that the experimental group scored slightly higher than the control group. Similarly, Meng et al. (2019) examined the use of Quizizz with two groups of Technical and Vocational Education and Training students. It was revealed that the students were motivated to continue learning because of the Quizizz's points features and leaderboard. Also, a comparable study administered by Castro (2018) among 16 nursing students focused on the relationship between gamification and medical vocabulary learning in a reading class. Results showed that students learned from using gamification demonstrated by the higher post-test results compared to the pre-test. Constructive opinions from the students were also gathered and analyzed using a Likert scale.

Finally, this research highlights the critical role of vocabulary knowledge in English language learning. Using Quizizz is proven to be an effective tool for enhancing vocabulary knowledge among participants. Its effectiveness was shown by significant improvements in the results of students' *post-test* scores after a four-month intervention. It also exhibits its potential to engage participants and enhance their language skills across speaking, listening, reading, and writing. All in all, the stable and direct instruction of vocabulary and the use of technological tools like Quizizz, are suggested to enhance students' language proficiency.

Conclusion

This study aimed to investigate the relationship between Quizizz and vocabulary knowledge. A four-month online exercise using Quizizz resulted in significantly higher post-test scores compared to the pre-test, demonstrating that Quizizz is an effective tool for enhancing vocabulary knowledge. Furthermore, the participants' opinions toward the use of Quizizz were overwhelmingly positive. All participants rated Quizizz favorably, as reflected in the results of the 5-point Likert scale questionnaire. Likewise, responses to the open-ended question revealed that the majority of the participants stated that their vocabulary knowledge had improved by using Quizizz. Based on the quantitative and qualitative findings of the study, it can be concluded that the vocabulary knowledge of English I students was enhanced using Quizizz. Additionally, the study explored students' increased engagement when using gadgets and technology compared to traditional paper-based methods. The results indicated that the learning environment was improved, and students viewed Quizizz as enjoyable and effective. They particularly appreciated features like the immediate feedback and the avatar provided right after they finished each activity. This suggests that the lessons were more relatable and motivating to 21st-century students.

Recommendations

The present study focused on the use of Quizizz to enhance the vocabulary knowledge of first-year English I students. The results of the study showed a significant improvement in the participants' vocabulary knowledge, as demonstrated by the high scores in the *post-test*. These results have vital implications for instructors, specifically in the context of new and digitally driven classroom environments, where interactive tools can foster better learning outcomes. Likewise, the participants expressed favorable opinions about the use of Quizizz, as indicated by the results of the Likert scale. Consequently, further research is recommended to explore the effectiveness of using Quizizz in improving vocabulary knowledge among students at different levels, in other universities, or in language proficiency levels. Likewise, further study can also be done to investigate the potential benefits of integrating multiple game-based platforms or other technological tools in vocabulary learning. Moreover, discovering the long-term effects of using game-based platforms on students' vocabulary retention would provide valuable insights. Finally, future studies can also scrutinize the influence of integrating multimedia elements into game-based platforms to better enhance vocabulary learning results for students with various learning capabilities.

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